UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,685	08/20/2001	Jason F. Hunzinger	09752-113001	2063

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EXAMINER
HASHEM, LISA

ART UNIT	PAPER NUMBER
2645	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/933,685	HUNZINGER, JASON F.
	Examiner	Art Unit	
	Lisa Hashem	2645	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 August 2001</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-63</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-63</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>20 August 2001</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claims 10, 16, 19, 24, 30, 33, 38, 44, 47, 52, 58, and 61 are objected to because of the

following informalities: There is insufficient antecedent basis for the limitation 'the group' in

these claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

3.   Claims 14, 28, 42, and 56 recite the limitation "the distance". There is insufficient

antecedent basis for this limitation in these claims.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1 and 3-63 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by

U.S. Patent No. 6,275,186 by Kong.

Regarding claim 1, Kong discloses a method of determining position information in a

wireless information system (see Figure 1; column 1, lines 16-19; column 3, lines 8-10)

comprising: comparing parameter information; identifying parameter origination information; and determining position information from the origination information (column 1, lines 37-52).

Regarding claim 3, the method of Claim 1, wherein Kong further discloses identifying a base station which transmitted the parameter information (column 4, lines 49-53).

Regarding claim 4, the method of Claim 1, wherein Kong further discloses identifying the parameter information as pilot pseudo noise offset (column 3, lines 31-38).

Regarding claim 5, the method of Claim 1, wherein Kong further discloses identifying the parameter origination information using a weighted system (column 5, lines 1-20).

Regarding claim 6, the method of Claim 1, wherein Kong further discloses comparing a plurality of parameter information (see Figure 1; column 3, lines 11-38).

Regarding claim 7, the method of Claim 1, wherein Kong further discloses correlating the parameter information station to a specific base station (see Figure 1; column 3, lines 11-38; column 4, lines 15-34).

Regarding claim 8, Kong discloses a method of determining position information for a mobile station in a wireless information system (see Figure 1; column 1, lines 16-19; column 3, lines 8-10) comprising: collecting a plurality of pilot pseudo noise offsets; and identifying a base station for each of the plurality of pilot pseudo noise offsets by evaluating that said identification is consistent relative to the other pilot pseudo noise offsets (column 3, lines 11-38; column 4, lines 15-34 and lines 49-53).

Regarding claim 9, the method of Claim 8, wherein Kong further discloses inherently ranking each pilot pseudo noise offset (column 6, line 55 – column 7, line 15; column 8, lines 1-32; column 9, lines 12-28).

Regarding claim 10, the method of Claim 9, wherein Kong further discloses said ranking

of each pilot pseudo noise offset uses a parameter selected from a group consisting of pilot

pseudo noise phase, pilot energy, and ratio pilot chip energy to interference (column 6, line 55 –

column 7, line 15; column 8, lines 1-32).

Regarding claim 11, the method of Claim 8, wherein Kong further discloses inherently

solving for the position information using the base station identities (column 3, lines 11-38;

column 4, lines 15-34; column 9, line 51 – column 10, line 7; column 10, line 53 – column 11,

line 19).

Regarding claim 12, the method of Claim 8, wherein Kong further discloses said

evaluating that said identification is consistent relative to the other pilot pseudo noise offsets

further comprises inherently searching a database for all base stations having a pilot pseudo noise

offset equal to a first pilot pseudo noise offset (pilot signal i) in said plurality of pilot pseudo

noise offsets to inherently form a first list (column 3, lines 11-38; column 11, lines 42-65).

Regarding claim 13, the method of Claim 12, wherein Kong further discloses inherently

searching the database for all base stations with a pilot pseudo noise offset equal to a second

pilot pseudo noise offset (pilot signal j) in said plurality of pilot pseudo noise offsets to

inherently form a second list (column 3, lines 11-38; column 11, lines 42-65).

Regarding claim 14, the method of Claim 13, wherein Kong further discloses inherently

calculating a distance from each base station in said first list to each base station in said second

list (column 11, lines 42-65; see Figure 8).

Regarding claim 15, the method of Claim 14, wherein Kong further discloses modifying

the distances by a weighting factor (column 5, lines 1-20).

Regarding claim 16, the method of claim 15, wherein Kong further discloses said

weighting factor is selected from the group consisting of said distance, pilot pseudo noise offset

weighting factor, a phase offset, and a sector antenna angle (column 3, lines 31-38; column 4,

line 53 - column 5, line 20).

Regarding claim 17, the method of Claim 13, wherein Kong further discloses comparing

distances between base stations in said base station lists (column 11, lines 42-65).

Regarding claim 18, the method of Claim 13, wherein Kong further discloses weighting

the entries in the base station lists (column 3, lines 31-38; column 4, line 53 - column 5, line 20;

column 11, lines 42-65).

Regarding claim 19, the method of Claim 13, wherein Kong further discloses wherein

said database is located in the memory of a network entity selected from a group consisting of

said mobile station, a base station, a server, and a position determination entity (see Figure 8;

column 3, line 53 – column 4, line 14; column 11, lines 42-65).

Regarding claim 20, the method of Claim 8, wherein Kong further discloses solving for

the position of the mobile station (column 4, lines 35-46).

Regarding claim 21, the method of Claim 8, wherein Kong further discloses averaging

the base station locations (column 4, lines 35-46; column 5, lines 1-5).

Regarding claim 22, Kong discloses a method of determining position information for a

mobile station in a wireless information system (see Figure 1; column 1, lines 16-19; column 3,

lines 8-10) comprising: collecting a plurality of parameters related to identification of network

entities or base stations; and identifying a network entity for each of the plurality of parameters

by evaluating that said identification is consistent relative to the other parameters (column 3, lines 11-38; column 4, lines 15-34 and lines 49-53).

Regarding claims 23-35, please see the rejections of the method in claims 9-21 mentioned above, to reject the method in claims 23-35.

Regarding claim 36, Kong discloses a mobile station position locator in a wireless information system (see Figure 1; column 1, lines 16-19; column 3, lines 8-10) comprising: memory which collects a plurality of pilot pseudo noise offsets (column 3, line 60 – column 4, line 14); and a processor which inherently identifies a base station for each of the plurality of pilot pseudo noise offsets by evaluating that said identification is consistent relative to the other pilot pseudo noise offsets (column 3, lines 11-38; column 4, lines 15-34 and lines 49-53; column 11, lines 42-65).

Regarding claims 37-49, please see the rejections of the method in claims 9-21 mentioned above, to reject the method in claims 37-49.

Regarding claim 50, Kong discloses a mobile station which determines position information in a wireless information system comprising: storage elements which collect a plurality of parameters related to identification of network entities or base stations (column 3, line 60 – column 4, line 14); and a processor which identifies a network entity for each of the plurality of parameters by evaluating that said identification is consistent relative to the other parameters (column 3, lines 11-38; column 4, lines 15-34 and lines 49-53; column 11, lines 42-65).

Regarding claims 51-63, please see the rejections of the method in claims 9-21 mentioned above, to reject the method in claims 51-63.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No.

6,275,186 by Kong as applied to claim 1 above, and further in view of U.S. Patent No. 5,970,414

by Bi et al, hereinafter Bi.

Regarding claim 2, the method of Claim 1, wherein Kong further discloses determining

the position information using the measurements of at least two time differences of arrival

(TDOAs) and Signal-to-Interference Radio (SIRs) of forward pilots received from neighbor BSs

in a mobile communication system (column 1, lines 55-59).

Kong does not disclose determining the position information using triangulation.

Bi discloses a method of determining position information in a wireless information

system (see Abstract) comprising: comparing parameter information; identifying parameter

origination information; and determining position information from the origination information

(see Figure 4; column 3, line 64 – column 4, line 43). Wherein Bi further discloses determining

the position information using triangulation (column 1, lines 4-33).

It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to modify the method of Kong to include determining position information using

triangulation as taught by Bi. One of ordinary skill in the art would have been lead to make such

a modification since the method of determining position information comprises obtaining

parameter information such as, pilot pseudo noise offset, and deriving position information utilizing a technique such as, triangulation.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

   - U.S. Patent Application No. US 2003/0146871 by Karr et al disclose a system and method for locating a wireless mobile station using a plurality of simultaneously activated mobile station location estimators

9.   Any response to this action should be mailed to:

<div align="center">

Commissioner of Patents and Trademarks
Washington, D.C. 20231

</div>

Or faxed to:

<div align="center">

(703) 872-9314 (for formal communications intended for entry)

</div>

Or call:

<div align="center">

(703) 306-0377 (for customer service assistance)

</div>

Hand-delivered responses should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Hashem whose telephone number is (703) 305-4302. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Fan Tsang can be reached on (703) 305-4895. Any inquiry of a general nature or

relating to the status of this application or proceeding should be directed to the Group

receptionist whose telephone number is (703) 305-3900.

lh
November 18, 2004

FAN TSANG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600